

Master Thesis Global Political Economy



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**Facing The Middle-Income Trap:
How Chile Overcame It?**

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Introduction:

It is widely agreed that fast economic growth from the low-income (LI) level to the middle-income (MI) one is mainly driven by technological catch-up, cheap labor, export-led growth, foreign direct investment (FDI) and increases in productivity. However, when it comes to jumping from the MI level to the high-income (HI) one, things become far more complex. Not surprisingly, there is huge disagreement about how developing countries can rise from the MI to the HI range. This phenomenon, namely: the 'middle-income trap' (MIT), was a term coined by Gill and Kharas to refer to the inherent challenges MI countries face in order to reach the HI status (2007). Empirical evidence suggests there are shared difficulties present at this level of income worth studied in depth, as out of the 101 MI economies in 1960, only 13 (without counting oil exporting countries) had obtained the HI status by 2008 (World Bank, 2013). A well-known example can be found in Latin America and the Middle East, where several countries reached the MI range during the 1960s and the 1970s but then got stuck at this level for the next decades. Only one country from these two regions reached the HI level by 2013 and remained ever since: Chile.

Towards the MIT two major groups of scholars have positioned themselves; those who argue it is a real phenomenon and those who do not. Among the scholars who acknowledge the existence of a 'trap', Kanchoochar (2015) distinguishes three bodies of literature. Each of them discern different causes and suggest different policies to overcome it. The first group emphasize the importance of institutions and education in producing economic growth. A second group point to promote industrial upgrading in a first place in order to escape the trap, while, the third group, also focused on industrial policy, stress how crucial it is to change the export composition by first exploiting the economy's comparative advantage.

Threshold	GNI/Capita (Current US\$)
Low-income	\$1,035 or less
Lower-middle income	\$1,036 to \$4,085
Upper-middle income	\$4,086 to \$12,615
High-income	\$12,616 or more

Figure 1. Income classification GNI per capita (Atlas method) (World Bank, 2013)

During the last quarter of the 20th century, the Four Asian Tigers (Taiwan, Hong Kong, South Korea and Singapore) adopted an industrial policy strategy that resulted in an unprecedented success. On the contrary, Latin American economies had no clear development strategy defined and continue since the 1970s to be stuck at the MI level. Evidently, experiences differ across time and space, what makes each economy worth studying in its particular context. This paper selects Chile: the first Latin American country to overcome the trap. According to the World Bank measures (see Figure 1), Chile quickly jumped from the MI to the Upper-Middle Income (UMI) level and finally obtained the HI status in 2013, hence the study is mostly focused on the two decades before 2013 (World Bank, 2013). Unlike many countries in Latin America, Chile is a unique example where neoliberalism worked out (Davis-Hamel, 2012), what makes interesting to assess *how* and *why* it worked out.

The research examines the trajectory followed by the Chilean economy during its time as a UMI country in order to evaluate in which of three categories respecting the three bodies of research indicated by KanchooChat (2015) the Chilean experience fits best.

First, it is fundamental to evaluate the arguments for and against the existence of a trap. In a second place, the literature review examines the three bodies of MIT literature distinguished by KanchooChat. The Chilean experience is then examined in reference to these in order to, ultimately, determine which of the three categories the Chilean success can be attributed to. The study answers the following research question: *'How did Chile overcome the middle-income trap?'*

Relevance of the study:

The MIT is present in many comparative studies and policy models, and although it is still a quite an ambiguous and undefined concept, its potential usefulness to guide policy-making is unmistakable. The idea of a trap can be understood as universally applicable since it represents a common struggle for countries in development. Despite the little amount of research exclusively focused on the MIT, this one can be studied from a range of perspectives from the field of economics and political economy. Moreover, Chile's phase as an UMI economy is an unprecedented case, similar to the Asian Tigers, Chile's economic growth was fueled thanks to an export-led growth strategy, but unlike them, this one was

heavily influenced by the neoclassical and not the statist model of political economy. Given these unique circumstances, the Chilean case is worth studying in respect to the MIT to determine which of the policies belonging to the three bodies of research had the biggest impact in creating growth at this income level.

Chapter 1. Assessing the Existence of the MIT and Its Main Approaches

The literature review is divided in two parts. First, it evaluates the arguments for and against the existence of the MIT as it is a new and still vague concept whose existence has not yet been widely acknowledged. As follows, the second part of the review introduces the theoretical framework to examine the peculiar Chilean case. It introduces the three bodies of MIT literature distinguished by Kanchoochar (2015), with the aim of reviewing their strengths and limitations in order to later assess in which of the three Chile's story fits best.

1.1. MIT: A Real Phenomenon?

1.1.1. MIT Skeptics:

Felipe, Kumar and Galope argue the idea of the MI trap is too vague and undefined. They claim scholars have widely failed to establish an explicit definition and a clear theoretical explanation (2017, p. 431). Their study contains a large sample of economies over several decades to determine the number of years past MI countries were trapped on average in comparison with MI countries at the present. The data reveals that past MI economies took on average much more time to graduate than countries stuck nowadays, so the authors conclude that what differentiates the 'escapees' from the 'non-escapees' is merely the capacity to avoid a severe growth slowdown and not some common structural difficulties inherent at this income range.

Felipe et al. underplay the importance of the East Asian miracle in the MIT literature, arguing that their rapid graduation was a rare phenomenon that should not be taken as a point of reference (2017, p. 446). By only taking average time the authors ignore two key things. First, when denying the existence of the MIT, it is irrelevant to find that past MI countries took on average more time to graduate than what countries stuck nowadays are so far taking, as these countries have not yet escaped. Second, average times completely disregard the in-country experiences. Notwithstanding that their calculations include a large amount of data from 124 countries from 1950 to 2008, this totally ignores the fact that the experiences of countries that graduated more than half a century ago (e.g. United Kingdom, France or Italy) are quite distinct from today's MI countries and therefore incomparable in

many respects. Their analysis is problematic as it ultimately homogenizes experiences across time and space.

Pritchett and Summer (2014) also claim the idea of a trap is obscure and deny its existence. According to the authors, this imaginary 'trap' is merely the deceleration of a prolonged period of economic growth. Their empirical study reveals that high rates of economic growth in the past were frequently followed by abrupt slowdowns. They compare the MIT with the statistical phenomenon 'regression to the mean' and discuss there is nothing special about this particular range of income, because although significant slowdowns are frequently present at this level, at others, these are also likely to occur (2014, p. 4). For instance, they question the conventional belief that the Asian giants, China and India, will continue to grow at a great pace since high rates of economic growth are unsustainable in the long-run while slowdowns, on the other hand, as time passes, become much more likely. Their approach is rather impractical and contradictory for disregarding the actual factors that might contribute to the slowdown (which they actually agree is frequent in this particular range of income), one that is characterized to be preceded by a long period of high economic growth.

Bulman, Eden and Nguyen (2017) differentiate the MIT in relative (compared to HI countries) and real terms. They agree that escaping the MIT in terms of relative income with for instance, the United States, is very difficult, yet in real terms, they deny the existence of such a trap based on the idea that graduates, like the Four Asian Tigers, succeed to grow faster throughout other incomes (i.e. from LI to lower MI), while non-escapees experienced lower growth rate at these levels. Therefore, they shift the focus to country-specific challenges instead of universal ones. Similarly, Im and Rosenblatt examine whether the transition from MI to HI is different from others and find that there is in fact, little difference across transitions in other income ranges (2015, pp. 3-4). However, they do acknowledge the usefulness of the MIT for guiding policy recommendations because unlike Bulman et al. argue, it distinguishes the shared challenges MI economies face at this level. Ultimately, they acknowledge its utility to draw lessons from "escapees" to better discern potential policies to promote sustainable economic growth (p. 25).

In conclusion, arguments against the existence of the MIT suffer from certain flaws, both in methodological and practical respects. Felipe et al. (2017) compare the experiences of ‘escapees’ during the 1960s with today’s MI countries, what is problematic, as it disregards how different MI economies were half a century ago. For example, current MI economies suffer from ‘premature de-industrialization’, their manufacturing sector is much smaller than past MI economies, so their challenges are remarkably distinct (Doner & Schneider, 2016, p. 624). Bulman et al., (2017) overlook the universal difficulties, while Pritchett and Summer (2014), and Im and Rosenblatt (2013), make the opposite mistake: hence homogenizing the experiences across time and space by pointing that slowdowns are equally likely to occur at other levels. Despite this, Im and Rosenblatt agree it is a helpful concept to guide policy-making.

1.1.2. MIT Believers:

Aiyar, Duval, Puy, Wu & Zhang compare the frequency of slowdowns at the three different income thresholds and conclude there is a ‘trap’ since decelerations have occurred more frequently at the MI level (2013, p. 12).

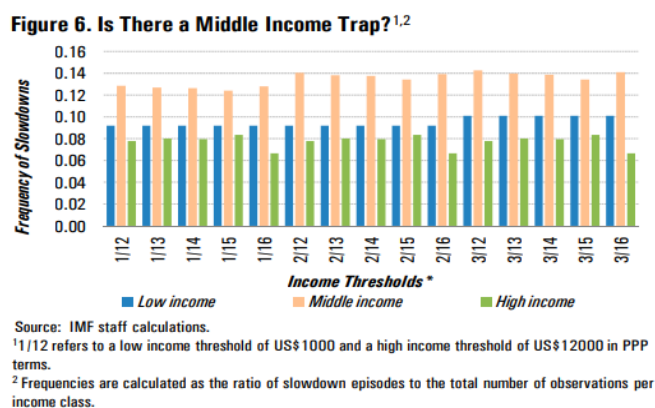


Figure 2: Frequency of slowdowns (Aiyar et al., 2013, p. 12)

Ohno (2009) takes a more qualitative approach making sense of the trap as a “glass ceiling” between the four stages of industrialization catch-up (based on the Asian experience). For countries to escape the MIT, they must overcome stage two of development: when firms do not need to rely anymore on Foreign Direct Investment (FDI) for technology transfers and support, and instead, in the third stage, local firms have the capacity to produce high-quality

goods as they have already mastered the technology and management required (Ohno, 2009, pp. 7-8).

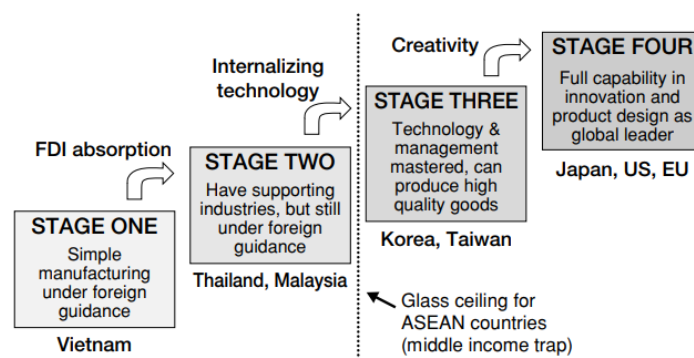


Figure 3: MIT as a technological ceiling (Ohno, 2009, p. 6)

The work by scholars who conceive the MIT as a real phenomenon is more compelling, however their approaches are vastly diverse. This, makes it challenging to agree on a singular theoretical framework because the cases studied, the causes of the trap, the research methods and the policies recommended, vary substantially (Kanchoochat, 2015, pp. 55-56). The study of the MIT is multidimensional, it can revolve around many political and economic issues at once. The next section of the review presents a simplification of the literature based on the three main bodies of research distinguished by Kanchoochat (2015).

1.2. Three Theoretical Approaches to the MIT

When studying the effects of the MIT, research done differ on several components such as: the methodological tools employed, levels analyzed, theoretical assumptions made, as well as the fundamental causes and policies recommended. This section introduces Kanchoochat's categorization of the three main bodies of MIT research (2015, p. 56). The first group is composed of neoclassical scholars who call for a stronger focus on improving education and institutions (Aiyar et al., 2013; Jimenez, Nguyen & Patrinos, 2012). The second group argues industrial policy is the solution: the state should to defy the economy's comparative advantage and direct resources to encourage industrial development (Paus, 2012). Finally the third group, also highlights industrial policy and the need to change export composition, but, by following the economy's comparative advantage (Lin & Treichel, 2012).

1.2.1. A) Getting Education and Institutions Right

One of the key strengths of developed countries over those trying to catch up is the presence of efficient and supportive institutions backed with highly-skilled professionals to steer and monitor them and an educated workforce that increases productivity. This body of research points to the necessity of building an effective institutional infrastructure and education system as two preconditions to guarantee sustainable economic growth.

In an study with a set of regressors containing as many as 42 explanatory variables, Aiyar et al. stress the importance of having the right institutions as the opposite could not only fail to produce economic growth, but also undermine it since poor institutions have a negative impact on efficiency, innovation and resource allocation (2013, p. 13). For the authors, institutions must be robust and business-friendly, so they can effectively promote property rights and contract enforcement in order to protect outside investors. The study arrives to the conclusion that, big government and regulation can often be strong impediments of growth in MI countries (p. 30). As it is noticeable, their policy prescriptions are based on the liberal conception that free markets are the main contributor to national economic growth. Furthermore, their mathematical model has certain limitations, as it combines a small number of observations with a large number of variables what “seriously limits the credibility and generalization of the results” (Han & Wei, 2017, p. 44).

Along the same lines, Kharas and Kohli (2011) and Jimenez et al. (2012, p. 2) understand the trap as the incapacity of MI countries to compete, on one side with LI countries in producing low-cost products, and on the other, with advanced economies in producing high-value products. To tackle this lack of competitiveness, the authors emphasize the importance of boosting productivity through education. In particular, education that grants people the necessary skills to make them more productive in these areas of the economy that are more likely to have the greatest impact on growth. For this understanding the coordination between government, universities and industry is extremely influential (Kanchoochat, 2015, 58).

Paus (2014) argues against this neoclassical economic growth model for narrowly understanding the MIT as a mere slowdown as it downplays the importance of time and location and only encouraging vague universal policies to somehow improve the institutional

and education systems (p. 13-14). She argues historical evidence contradicts the neoliberal body, as two thirds of the total slowdowns in MI countries occurred after the 1980; when developing economies pursued market-led policies recommended by the neoliberal Washington Consensus (Paus, 2017, p. 3).

In regard to criticism towards education, it is acknowledged that advancements in the system do not necessarily enhance productivity per se, since only improvements in education in certain sectors and at a particular level might actually have an impact on economic growth (Jimenez et al, 2012 p. 4). The casual link between education and higher economic growth is indirect, thus it is very difficult to assess its positive effects (Kanchoochat, 2015, p. 58).

In sum, this body of literature argues the government is supposed to have a minimum role in economic affairs; the best it can do is to improve institutions by making them more efficient and market-friendly while advancing productivity through education. In spite of the vagueness and the empirical contradictions, this category is highly relevant for the case of Chile. In contrast, the next two bodies call for an active government to structure the economy's industries and export basket.

1.2.2. B) Industrial Upgrading by Defying Comparative Advantage

Because in theory MI states cannot compete with LI countries in the production of cheap commodities, neither in high value-added activities as they lack the productivity of HI countries, Paus analyzes the available routes to enhance productivity and sustained growth for developing countries (2012, p. 116). In a debate with Lin, Chang (2009) points to the necessity that the state encourages structural transformations meant to promote technological development and produce sustainable long-term growth. Such approach demands the government to take an active role in "creating new comparative advantages in technologically more advanced activities" (p. 129). The argument of this second group of writers is based on economic as well as political factors. It characterizes the trap as "the lack of structural change towards higher value-added activities in the context of international competitiveness" (Paus, 2014, p. 13). Thus, the primary cause and solution for the trap is attributed to the lack of an active government as the architect of industrial policies targeted to promote structural change and technological advancements.

Along these lines, Doner and Schneider (2016) question why is it that although there is substantial literature about the causes of the trap and the policy remedies to escape it, countries still have so many difficulties to put the theory into practice. Indeed, it is mainly in the hands of the economic and political elites to invest the national resources (frequently scarce) in long-term projects like education and research and development (R&D) (pp. 610-611). These governmental institutions are needed to prudently coordinate the interests of multiples actors when implementing the policies aimed to upgrade the country's industries (p. 612).

Like the previous, this approach also suffers from certain flaws. Ohno argues that the idea of a country in development redirecting its scarce resources to develop sophisticated technologies is both, a 'myth' and unfeasible. A country should instead, import complex technologies from abroad and exploit them following the country's comparative advantage – and not waste resources attempting to create them from scratch (2009, p. 9). In principle, for Ohno (2009) and Lin and Treichel (2012), it is counterproductive and extremely difficult to attempt to grow industries where a country has no comparative advantage.

1.2.3. C) Changing Export Composition by Following Comparative Advantage

For the third body of scholars the export composition of the economy is also critical to produce growth. This category puts the blame on the absence of the necessary means to produce and export high value-added goods. The MIT is understood as the lack of "labor productivity growth through technological innovation and industrial upgrading." (Lin, 2017, p. 6).

To escape the trap, Lin and Treichel (2012) argue a country should focus on its comparative advantages at each stage of development. This strategy would allow firms to be more competitive domestically and abroad, what would generate large surpluses that could then be re-invested in better physical and human capital, or even, redirected to new industries where the country could potentially develop new comparative advantages and thereby, creating a vicious circle that upgrades the country's export basket over time. Ultimately, allowing the country to gradually climb the ladder and catch-up with HI countries more rapidly (p. 7). Hence, to assess if the Chilean experience fits into this category it is

required to track the evolution of its export basket, find comparative advantages and determine whether there were spillovers to develop new industries.

The criticism of the second and third bodies of literature is mutual. Chang agrees that developing countries need to climb the technological stairs of the ladder in order to develop, yet he deeply opposes to the idea that merely focusing on exploiting the comparative advantages is the fastest way. First, workers cannot easily be redirected to the more competitive industries of a country. Second, a country exploiting its comparative advantage will not accumulate enough capital to enter new industries enough rapidly, since surpluses are not likely to be saved to be reinvested in other industries, rather spent in more instruments to continue exploiting the current industries (Lin & Chang, 2009).

1.3. Theoretical Conclusions

It can be concluded that none of the three groups distinguished by Kanchoochar (2015) propose an ideal model to approach the MIT. The three bodies of literature have both, strengths and limitations to explain its causes and to propose adequate policies to overcome it. The next section introduces the case of Chile and lays the foundations of the research design. Subsequently, chapter 3 applies the three models to the Chilean experience, with the aim of determining which one fits the best to this case.

Chapter 2. Chile Facing the MIT

As a country that has recently escaped the trap (in 2013 according to World Bank standards), Chile presents itself as unique case study. A story quite different from the East Asian miracle, yet neither similar to Latin America.

2.1. Profile

Unlike the rest of Latin America, Chile is believed to be an example where neoliberalism worked out (Davis-Hamel, 2012). The country's GDP growth averaged an outstanding 5.05% in the two decades before becoming a HI country (from 1994 to 2013) (OECD, 2019a). This success is widely attributed to its export-oriented economy focused on natural-resources. Furthermore, Chile is one of the most financially integrated economies. In the last decades the country has been at the vanguard of financial and capital account liberalization and as result, its total sum of foreign assets and liabilities relative to GDP was considerably above the emerging economies average (Podpiera, Sosa and Wu, 2012, p. 4). The government has been very committed greater trade openness and has gradually reduced tariffs close to only 2%, encouraged FDI absorption, and guaranteed economic stability to foreign investors. In a nutshell, the Chilean economy is deeply liberalized and business-friendly. The next section studies in greater detail the historical context of Chile's economic model.

2.2. The Chilean Liberal Transformation

The major transformations in the Chilean economy relevant to this study date back to the late 70s. Accordingly this section revises some of the key economic policies since the 1973 coup d'état to the mid-2010s (when Chile obtained the HI status). The usefulness of a comprehensive historical analysis is clear as it places into context the policies that might have contributed (or discouraged) the country to reach the HI range.

In just a couple of years, Chile went from having a leftist government to become subjected to the rule of a fascist dictatorship. If the first entity shaped the economy according to the socialist model, the second, was one of the pioneer states experimenting with the brand-new neoliberal economic model.

With Augusto Pinochet in command, the military took control over the country in 1973 and soon reversed many of the leftist reforms. The restructure of the economy began when the Chilean dictator became persuaded by a group of Chilean neoliberal thinkers known as the “Chicago Boys”. Most among this group of scholars were educated at the University of Chicago under the influence of Milton Friedman and Arnold Harberger (Rector, 2019).

Despite being a time of high economic uncertainty, during the 1970s, Pinochet’s government embraced the yet untested neoliberal understanding of a free market economy. The early policies included: abrupt privatization, deregulation, liberalization of the financial system, capital account liberalization (in 1980) and large cuts in public spending; moreover, in 1979 the Chilean peso was pegged to the US dollar at a fixed exchange rate. Friedman’s shock-therapy carefully targeted these areas with the potential to create a business-friendly atmosphere that could rapidly promote growth and encourage trade and foreign investment (Ahumada, 2019, p. 84; Rector, 2019, p. 201).

For five years (1976-1980) the economy boomed, but the new aggressive but still unsustainable reforms proved to be unsuccessful in the long run (Spillan, Virzi, & Morales, 2017, p. 75). For example, in the area of trade, domestic businesses were dangerously exposed as a result of the tariff reduction from an average of 100% to less than 10% in just a few years (Rector, 2019, p. 202). There was an unequal access to the market; conglomerates were soon consolidated for having supported the neoliberal turn, while big businesses enjoyed, among other things, exclusive access to foreign capital (Ahumada, 2019, p. 85).

Unfortunately, the economy was too vulnerable to the constraining forces coming from the global economy and the government struggled to adjust monetary policy to external shocks. These shocks pushed the government to peg the Chilean peso off the fixed exchange rate (Roberts & Araujo, 1997, p. 35). In addition, debt spiked to almost 120% of the GDP (CEICDATA, 2018). The measures adopted to this failure, actually suggested that, (according to neoliberal standards) part of the problem was that the economy was still too dominated by the state.

In 1985, Hernán Büchi was appointed to save the economy. The new minister of finance went one step further applying aggressive supply-side economic reforms in order to

promote FDI, privatize more companies and create a new philosophy and mentality that paid greater value to the entrepreneurial role and business interests of private firms. Finally, the reforms had a positive impact producing high rates of sustainable export-led growth as well as investment for the upcoming decade (Spillan et al., 2017, p. 76). In addition, with Büchi Chile's debt was reduced by half, yet at the cost of austere measures in public spending (CEICDATA, 2018).

In 1988, Pinochet resigned when a public referendum voted against him to remain in power. Supported by big business owners, Büchi decided to run for president. However, the public perceived him as too closely related to Pinochet and thus many feared the continuation of the regime. In the end Patricio Aylwin, a moderate center-left candidate from the Christian Democratic Party, won the presidency (Kyle, 2000, pp. 100-101). His victory marked the beginning of the *concertación* era which refers to the continuing rule of the Coalition of Parties for Democracy from 1990 to 2010, composed by: the Christian Democratic Party, the Socialist Party of Chile and the Party for Democracy (Fernandez & Vera, 2012, pp. 10-11).

With Aylwin, Chile experienced its highest rates of annual economic growth (average of 7.8%), unfortunately this success came along with very high rates of inflation (average of 17.7% per annum) (Solimano, 2013, p. 340). The president had stressed several times during his campaign that despite the economic miracle, about 40% of Chileans continued to live below the poverty line. Maintaining high rates of economic growth while assisting those segments of the population less benefitted became one of the main challenges for the subsequent governments. In spite of the rising inequality, the neoliberal model of export-led growth and privatization continued to be at the core of the government's agenda (Rector, 2019, p. 239).

The outlook was more positive during the Frei Ruiz-Tagle administration. Tariffs were reduced even further and inflation finally tamed. The economy boomed during Frei's first two years, however, the 1998 the Asian economic crisis and the collapse of the Argentinian economy hit Chile very badly due to its huge dependence on Asian demand (one third of the total and its high interconnectedness to neighboring Argentina. Nevertheless, Chile continued to grow and to be regarded as the healthiest in the region (Rector, 2019, p. 240).

To stimulate trade in accordance with the logic of neoliberalism, the next president, Ricardo Lagos, signed free trade agreements with Mexico, Canada, the European Union and the United States. When in 2002, the neighboring economy of Argentina collapsed, the government could successfully cushion both internal and external shocks with monetary policy adjustments. Instead of stimulating the economy through deficit spending, Lagos agreed to cut interest rates (Rector, 2019, p. 240).

Unfortunately, this successful neoliberal model came along with a high price for everyday Chileans. Income distribution was among the most unequal in Latin America and the highly inefficient and privately controlled health and education systems generated massive debts among the less fortunate (Fernandez & Vera, 2012, pp. 10-11). In 2006, Michelle Bachelet, a center-left socialist and feminist politician inherited this unequal economy and gave hope for change. Yet, by the end of her presidency in 2010, the situation was not very different from the beginning (p. 13).

The neoliberal economic model in place constrained the actions of her government. Instead of spending large amounts of Chile's account surpluses, Bachelet created the Economic and Social Stabilization Fund (ESSF) with the logic of saving the profits generated by copper exports when prices were high and the economy was stable, and to only make use of this fund when urgently needed (Solimano & Guajardo, 2018, p. 201). This prudent policy became an essential tool to protect an economy with an export-led model as such from external shocks. For example, in order to finance the 2009 fiscal expansion almost US\$9 Billion were spent from the ESSF throughout that year. Sovereign funds were used again the next year to help reconstruct the country from the catastrophic earthquake (p. 212). The ESSF served as Chile's cushion against the risks of its export-led growth strategy promoting macroeconomic stability.

In 2010 copper prices spiked and proceed to gradually decline. This year, multi-billionaire businessman Sebastián Piñera became president – a liberal conservative from the center-right party National Renewal. During his tenure, Chile's growth became less conditioned by exports and more by domestic consumption – the health and educational sectors became highly profitable for private businesses (Benedikter & Siepmann, 2015, p. 21). During these four years GDP growth averaged 5.33% (World Bank, 2018a).

Chile's governments have been particularly concerned about the macroeconomic fundamentals of the economic (monetary stability, fiscal discipline, business openness, investment), yet it has largely neglected social welfare policies. Adjusting monetary policy became the government's main tool to hedge against external shocks, and hindsight, it seems that Chilean economists prioritized macroeconomic long-term prosperity over short-term fixes (Rector, 2019, p. 240).

2.3. Methodological Remarks

This top-down empirical study aims to build a comprehensive explanation about the casual mechanisms that produced the outcome of Chile overcoming the trap by testing the three theoretical bodies of MIT research distinguished by Kanchoochar (2015). A process-tracing method is employed as it serves as a tool "to study causal mechanisms in a single case research design" (Beach & Pedersen, 2013, p. 2).

To construct an explanatory narrative the research concretely approaches the question with the method 'explaining-outcome process tracing'. Such a method can be suitably employed to give an account of historical events as it allows the researcher to test theories in order "to see whether they can provide a minimally sufficient explanation of the outcome"(Beach & Pedersen, 2013, p. 63). Minimally sufficient is interpreted as an explanation that accounts for an outcome, with no redundant parts (p. 18). In this case, the outcome is Chile overcoming the trap and the theories to test are the three categories distinguished by Kanchoochar (2015).

Since it is unfeasible to track and measure what exactly contributed to economic growth and what hindered it, as a way to face this epistemic burden, the three categories are used as a reference to simplify and classify the most influential factors in Chile's path to the HI level. To test the three categories, the research has compiled historical data from statistics, trade and macroeconomic indicators. The synthesized evidence is categorized according to the three bodies of research in chapter 3.

2.3.1. Limitations

There are other inescapable limitations in the design. Firstly, with this particular method of analysis one cannot be fully sure whether the conclusion arrived is the best explanation

among the available – it has to be an explanation that covers the most relevant aspects of the outcome (Beach & Pedersen, 2013, pp. 20-21). For that reason the analysis must be highly descriptive, supported by a rich collection and interpretation of relevant empirical data. Secondly, however, the presence of silent evidence, that is, inaccessible yet decisive evidence (Taleb, 2007, pp. 100-119), is a major weakness in historical analyses of this type, that frequently force the researcher to fall into the narrative fallacy (p. 62-83). Nonetheless, the supportive theoretical framework is considered to be of great help as it serves to simplify and categorize the plausible explanations and hence can mitigate the inevitable lack of empirical material. Thirdly, in spite of this, another unavoidable limitation is that some conclusions arrived might not be mutually exclusive in the three categories. Some measurements and indicators are present in more than one category and the results might reveal certain commonalities.

Chapter 3. Looking at the MIT Phenomenon in Chile: A Sectorial Approach

3.1. A) Chilean Institutions and Education:

This group of research composed by neoclassical scholars propose that the state should be limited to build business-friendly and efficient institutions and investing in education according growth targets. Because the link between institutions and education and economic growth is indirect, it is unfeasible to determine with certainty the extent that improvements in these two areas have had in the Chilean economy. KanchooChat argues that education per se and good governance are not enough to produce economic growth. Instead, growth-enhancing governance and education with industrial targets are more directly linked to economic growth (KanchooChat, 2015, p. 58).

Institutions

Based on the neoclassical understanding of economic growth, this section aims to assess the quality of Chilean institutions in terms of how inclusive, business-friendly and growth-enhancer they have been. According to Acemoglu and Robinson (2012), The wealth of a nation is determined by how inclusive its institutions to economic participants are. The role of the state is essential to create an environment that incentivizes people to participate and innovate in the marketplace, while, providing with hard and soft infrastructure, defending property rights and guaranteeing contract enforcement. Therefore, if Chile's success is attributable to this category, it is a necessary condition to observe the presence of efficient institutions that promote a business-friendly and inclusive environment.

There are several indicators that place Chilean institutions among the world's top most inclusive. The worldwide government indicators (WGI, 2013) (a dataset that assess the quality of governance and stability regulatory frameworks) ranked Chile throughout the years 2002, 2007 and 2012 on a similar basis to HI OECD countries. Concretely in the indicators 'government effectiveness', 'regulatory quality', 'rule of law' and 'corruption' Chile stands out for its great performance (Kaufmann, Kraay & Matruzzi, 2019). This success could be already reflected in 2008, when the country ranked 33th country in the ease of doing business index (World Bank, 2007, p. 6). Accordingly, Chile continues to attract large amounts of FDI; as percent of GDP it ranks among the world's top highest six (OECD, 2018, p.

41). For instance, in 2012, Chile's inward FDI (11.28% of GDP) was three times higher compared to neighboring Brazil (3.33%) and four times Argentina (2.64%), and more than seven times the OECD average (1.51%) (OECD, 2019b). Forbes magazine ranked Chile the 24th best country for doing business, the 8th in trade openness and the 27th in property right defense (Forbes, 2011).

These indicators suggest that Chile is indeed a country where the interests of investors, local or foreign, are assumed to be well protected and hence comes as no wonder, the high amounts of FDI it attracts. Still, FDI inflows is not a conclusive sign of inclusive institutions. A country with growth-enhancing institutional frameworks also needs efficient economic institutions to guarantee the stability of the system.

A good example for this is when President Lagos announced a new fiscal policy rule to restructure the fiscal balance in 2000; with the aim to "reduce fiscal and macroeconomic volatility and to minimize the procyclical behavior of the budget" (Marcel, 2013, pp. 3-17). The structural balance rule was more than a complete success; it stabilized GDP growth and volatility between the years 2000 and 2005 by a third (p. 25). Following the reform, GDP growth averaged 4.6% during this period. The IMF praised Chile's regulatory framework for protecting its financial system from the economic turmoil by guaranteeing its stability and mitigating its impact through "decisive and unprecedented policy measures" (IMF, 2009, p. 65).

The way Chilean institutions tackled the 2008 global financial crisis serves as another illustration of their commitment to economic stability, that actually, resulted to be a turning point for overcoming the MIT. Certainly, the ESSF (created in 2007) was a cushion against the global recession – by December 2008, the fund had already saved US \$20.2 billion in surpluses. Thanks to it, Bachelet's government could successfully implement countercyclical policy measures involving a fiscal stimulus plan, a pro-credit plan and a pro-employment employment accord; the three were meant to support economic activity, guarantee credit to businesses and alleviate unemployment, respectively (IMF, 2009, p. 62). In addition, the government could comfortably invest in the construction of new public infrastructure (Guellec & Wunsch-Vincent, 2009, p. 24). Furthermore, the Chilean banking and financial systems have delivered to the challenge, proving to be resilient and far-reaching, even

during the crisis. Circa 2010 just 17.6% Chilean firms found finance as a major constraint, close to Korean levels (12.1%) (World Bank, 2010).

Without the sovereign wealth fund, Chile would have had much more trouble to undertake such costly yet very convenient countercyclical measures. For the ministry of finance, it has become a key macroeconomic tool to protect the export-led and open economy against internal and external shocks (IMF, 2009, p. 64). How have Chilean institutions been so instrumental in promoting growth is also the result of improvements in education.

Education

Education in Chile has been and continues to be a hot issue and the origin of several protest movements. In 2006, a series of student demonstrations escalated into the largest public uproar since the democratic turn of 1990. The Chilean student movement demanded greater access to education and condemned the widespread inequality attributing it to neoliberal policies (Kubal & Fisher, 2016, p. 408). In 2011, another critical student-led protest broke out, also beginning first as an outcry against the Chilean education system and later turning into a major political and social unrest (Guzman-Concha, 2012, p. 411). These upheavals were owed in part to major discontents among the population with the unequal access to education, yet in two decades prior to 2013 there were large reforms in the system, as follows it is analyzed whether these have contributed to Chile escaping the trap.

Kharas and Kohli (2011) and Jimenez et al. (2012, p. 2) stress the importance of MI economies boosting productivity through education to tackle the lack of competitiveness against HI economies in the production of high value-added products. A highly-skilled labor force can be crucial in generating growth and ensuring the well-functioning of institutions. However, improvements in education might not per se have an impact on productivity, only advancements in particular areas at certain levels might have a major economic effect (Jimenez et al, 2012 p. 4). Accordingly, the next paragraphs present an analysis of Chile's education system exclusively focused on the tertiary level and on the country's comparative advantages.

In regard to Chile, there are two type of tertiary education relevant to this analysis: type-A and type-B. Tertiary type-B is usually shorter and more focused on the elementary practical and technical skills to quickly enter the labor market. On the other hand, type-A is more theory-oriented and primarily offered under five-year or longer university programs. While Chile ranks low in rates of tertiary type-A enrollments, it is the second (behind Korea) in rates of tertiary type-B enrolments (OECD, 2009, p. 51).

The tertiary type-B education is taught in CFTs (Technical Education Center) and IPs (Professional Institutes). These programs are considered to give great opportunities to the poorest segments of the population to rapidly enter the marketplace, and in Chile, these have served as a safety net to those who cannot afford university education. On this subject, the tertiary education type-A, Chile continues to lag behind the OECD average, but unlike in the type-B, it has significantly improved its relative performance in the past two decades. When Chile was under the rule of Pinochet's regime, the educational system was reduced to eight universities with two state universities comprising 65% of all students. Since 1981, the system went through a radical transformation led by the government. Nowadays there are 60 universities in Chile, 31 of them privately owned (Graham, 2017, p. 14).

The number of Chilean students enrolled in tertiary education more than tripled between 1995 and 2013 (from 342,000 to 1,061,000) (UIS, 2019). Only between the years 2005 and 2013, the total number of students grew a 76%, the biggest increase among all OECD countries mostly composed by young adults (between 18-24 years old) belonging to the lowest income deciles of the population (OECD, 2016). Furthermore, in the past years the system has been particularly inclusive for women and students with indigenous backgrounds (OECD, 2017, pp 177-178).

In 2013 Chile spent 2.3% of its GDP on tertiary education, the third biggest spender among the OECD (OECD, 2019c). The country has the highest rates of private spending on education compared to public among all OECD countries and UMI countries. In 1995, 75% of the total spending was provided by the private sector, and 85% in 2008. Chile, regardless if provided by the public or the private sectors, has seen massive increases in education spending in the decade before becoming a HI economy.

Education in regard to Chile's most profitable comparative advantage has also improved. From a mining industry-oriented perspective, the research output in this field has continued to increase. Two Chilean universities are distinguished for their contributions: the University of Chile and the Pontifical Catholic University of Chile (UC). Both, continue to feature among the top 250 in the QS University Rankings (Graham, 2017, p. 16). The University of Chile ranks among the globe's top 10 mineral and mining engineering specialized universities (Top Universities, 2019).

Higher education availability in the fields of science and engineering has increased considerably. In 2000, 1,485 first degrees (per million population) were offered, by 2010 the number increased to 3,980, out of which 18.2% were in science and engineering. PhDs offered (per million population) went from 4 in 1996 up to 25 in 2010, 70% of them in science and engineering (Foxley & Stallings, 2016, p. 7; NSF, 2012). As a result of this positive link between education and the mining industry, more than 235,000 persons were employed in the mining sector, or 3.08% of the total Chilean workforce (EMIS, 2017, p. 27).

Finally, it is important to acknowledge that despite these positive improvements, the persistent unequal access to higher education continues to be a central problem for Chileans. Lack of access to finance education is one of the biggest issues Chilean institutions must tackle in order to meet appropriate HI standards. University fees averaged 40% of income per capita, financing these can cost as much as 100% of the total household income for the lowest centiles of the population what ends up resulting in excessive borrowing very often (Foxley, 2012, p. 144). In the repeated protests led by Chilean students, these have intensely, and even violently, expressed their discontent with the state of affairs not exclusively in what regards to quality of and access to education, also to the health system, income inequality and further social issues.

On one hand, the Chilean education system has experienced a notable transformation in the past two decades, especially in what respects to higher education in these areas where Chile has a comparative advantage (i.e. mineral and mining engineering), that might have had a positive impact on productivity and economic growth. On the other hand, this progress has not been enough inclusive, in partly due to the high costs of the privately managed education system and the persistent income inequality.

3.2. B) Industrial Upgrading in Chile:

This second body of research attributes the MIT to insufficient or inadequate quality of industrial policy. As it is explained in the introduction, the success of previous escapees is associated with industrial policies aimed to develop new comparative advantages in higher value-added industries. Scholars in this body of literature emphasize that what a country actually exports can make a huge difference and accordingly argue that: it is unfeasible for MI economies to catch up without an active state in industrial policy or one that is built upon primary-based industries.

In the case of Chile, the government has not just failed to create comparative advantages in high value-added sectors; its national industrial strategy did not even pursue this objective. The 2006 report of the National Innovation Strategy For Competitiveness (Consejo Nacional de Innovación para la Competitividad or CNIC for short) clearly opposed to the idea that Chile had to move beyond and renounce to its dependency on natural resource exports. In fact, the contrary was stated: Chile had to maintain its resource export-led growth directing investment to advance technologies only in those industries where it already has a comparative advantage (Agosin, Larraín & Grau, 2010, p. 14; Teichman, 2013, p. 69).

Chile's industrial policy largely missed to pursue the policies presented under this category. Nonetheless, it is important to analyze the motives for this outcome in order to better understand how Chile actually overcame the trap. Indeed, the disconfirmatory results of this category are also useful to discern *in lieu of what* the Chilean government overlook the policy prescriptions of this body of research.

Prioritizing the Private Natural Resource-Based Sectors

On a structural level, the underlying forces of neoliberalism have constrained the actions of Chilean policy-makers. Among others, the powerful influence of big business interests has prevented the reroute of investment (Teichman, 2013, p. 67). As it is highlighted in the first category, every Chilean government since Pinochet has been fully-committed to this liberal economic policy model. Rather than an active state in industrial policy aimed at, for instance: protect infant-industries, subsidize potential successful companies or invest in R&D, instead,

the Chilean government has been more inclined to direct resources to the already developed industries in the natural resource-based sectors.

Still, even though if the government was absent in the process of innovation, Chile's business and competition-friendly environment, macroeconomic stability, trade openness, should have promoted an innovative atmosphere (Benavente, de Mello & Mulder, 2005, p. 11). It is intriguing why then, the manufacturing sector has declined from 19.3% of the total value added of the GDP to just 11.1% of the total, while mining increased from 40% of the value of the total exports in 2003, to 57% in 2013 (World Bank, 2018b). There are some reasons for this lack of innovation.

First, there has been a shortfall in R&D investment and innovation. Between 2007 and 2013 Chile's spending on R&D as share of its GDP averaged 0.35%, almost seven times lower than the OECD average (2.29%) (OECD, 2019d), and around three times lower in comparison to the UMI economies of Russia, Malaysia and Brazil. Moreover, out of the little investment proportioned by the government, most of it has been directed to low-tech industries. For instance, during Bachelet's first tenure, the government promoted the funding of clusters where Chile already had a comparative advantage (Dingemans, 2016, p. 651), namely, innovation and entrepreneurship centers focused in the natural resource-based industries (Schwellnus, 2010, p. 30). Such industrial planning allowed for vertical but prevented horizontal expansion. Furthermore, the shortage of public R&D spending was not filled by private entities either – out of the total 0.4% GDP expenditure in R&D in 2015, only about a third was contributed by the private sector (the lowest in the OECD) (Ahumada, 2019, p. 212).

However, despite accounting for less than 3% of the total population in Latin America, Chile attracted 10% of all multinational projects for R&D centers and 9% of their total expenditure in the continent, only behind Brazil and Mexico (Foxley & Stalling, 2016, p. 104). Certainly FDI can be very positive for an emerging economy when it promotes technology and knowledge transfers, yet, the impact of FDI spillovers on the economy depend on the nature of the areas which is directed to. In the case of Chile, FDI has been largely missing in the more technologically advanced industries. As much as 34% of the total FDI drawn was directed to the mining sector, 22% to services and just 11% to manufacturing (Korinek, 2019,

p. 14). The industries that have profited the most from FDI have been the ones already benefited from business-friendly policies, principally, from the natural resource-based sectors as well as a few service sectors. And, apart from having little connections with the rest of the economy, these industries lack the potential to produce spillovers into high-tech and high value-added areas (Caldentey, 2012, p. 189).

As a result, innovation output in Chile is very low for HI standards, its high-technology share of manufactured exports was just 4.6% of the total; well below UMI economies like Malaysia (43.4%) or China (25.8%), and even smaller than the Latin American average (10.9%) (Foxley & Stalling, 2016, p. 9; NSF, 2012). Most innovation has occurred in foreign enterprises or by foreign actors, for example, patent applications filled per million population were 166 circa 2010, and 146 of these were filled by non-residents (WEF, 2010; Foxley & Stalling, 2016, p. 9)

MI countries face the following conundrum: to exploit their comparative advantages or to attempt to create new industries. Continuing exploiting the already specialized and profitable industries that once lifted the country from poverty is both, a blessing as it might continue helping to produce economic growth, and a curse, since it costs the opportunity to exploit new industries. This situation is exacerbated when the comparative advantage lies in very low-tech industries. In the case of Chile, concentrated in the exploitation of natural resources with few potential technological spillovers (Ahumada, 2019, p. 196).

This section estimates that Chile's success in curving the MIT cannot be attributed to industrial policies aimed to technologically upgrade its industries. The inability to create a more diversified high value-added export basket is the result of several structural weaknesses that emerged as consequence of the neoliberal policies, which have generally limited opportunities to diversify exports as it has instead, promoted the exploitation of these areas where the country already had a comparative advantage (Caldentey, 2012, p. 186).

3.3. C) Chile's Comparative Advantages and Export Composition

Like the previous, this category remarks the importance of an export-driven strategy to overcome the trap. However, scholars from this body are pessimistic about expecting MI countries to produce high valued-added goods since they lack the necessary means (Lin, 2017, p. 6). The solution lies in an export-led growth strategy pushed by an active state to sponsor comparative advantage targeted industrial policies. An active state encouraging capital and technological spillovers from industry to industry is considered to be the fastest way to build a sophisticated export basket.

To attribute Chile's success to this category the following conditions have to be present: 1) consistent exploitation of its comparative advantages, 2) significant capital and technological spillovers for the promotion of new industries, and as a result, 3) notable diversification of its export basket towards higher value-added industries.

1) Exploitation of Comparative Advantages

Chile's best comparative advantages are present in the natural resource-based sector. Mining is the champion industry, making for 40% of the total value of Chile's exports in 2003 and rising to as much as 57% by 2013. In real terms, the value of mining exports have been multiplied by five from US \$8 Billion to US \$20 Billion during the same time span (Banco Central de Chile, 2019).

Copper accounts for 90% of the total value and there is no doubt Chile has exploited this industry to a very large extent. So much that even between 2000 and 2014, the total factor productivity in copper mining actually decreased a 14%, while copper production rose a 19% between 2000 and 2017 (CNP, 2017, p. 75). That is mainly, because during the commodity-boom and the consequent high copper prices, mining firms prioritized increases in production at the cost of productivity (CNP, 2017, p. 83).

During the first half of the commodity-boom, from 2000 to 2008, copper prices multiplied by five. This increase was indeed, extremely beneficial for the Chilean economy, given that at the time, the country was supplying more than a third of the world's total copper. If in 1996 copper made about a 7% of Chile's tax revenue, thanks to the commodity super-cycle during 2006 and 2007 the share increased up to 30% (CNP, 2017, p. 49).

'Codelco', Chile's state-owned mining firm, contributed with 5.8% of the total tax revenue collected by the government between 1995 and 2003; between 2006 and 2010, however, this share rose to 26.7% (Korinek, 2013, p. 16). Now that is clear that Chile has largely succeeded to exploit its comparative advantage in mining, the rest of the section focuses on spillovers and the diversification achieved.

2) Spillovers

There has been a notable degree of export diversification but mostly within the natural resources sector. Behind the mining industry, other natural-related industries such as forestry, agriculture and fishery, comprised the second largest industry. Chile is among the largest exporters of wine, salmon and wood pulp; these industries could have only emerged thanks to a mixture of technological and knowledge transfers and FDI spillovers as they have common denominators to other resource-based industries (Caldentey, 2012, pp. 189-193). Nevertheless, the subsequent effects of this accomplishment have been very limited.

Agosin, et al. find only 155 success export-discoveries between 1991 and 2003 (new products that by 2007 exceeded the value of US \$20 million) (Agosin, 2009, p. 18). The resource-based sector made up for most of them; especially, wood and wood products like pulp and paper; fish products like salmon and trout (Agosin, 2009, p. 17). Within the natural resource-based sector, agriculture, livestock, forestry and fishing comprised the second biggest industry area where Chile enjoys a comparative advantage. In real terms it increased from US \$2 billion to US \$5.6 billion from 2003 to 2013, but in relative terms to the total value of exports, it decreased from 10% to 7% during the same years; while, as it previously stated, mining continue growing at the expense of other industries (Banco Central de Chile, 2019). Hence, most of the progress made in these industries took place during the 1990s, ever since, the total share has decreased while mining continued to grow.

The product concentration index, also known as Herfindahl-Hirschmann Index (Product HHI) measures how diversified a country's exports are; a number close to 0 shows these are largely and homogenously distributed among a limited series of products, whereas, a number close to 1 indicates these are very concentrated on a few products. In 1995, Chile's product concentration index was 0.305 and increased to 0.329 by 2013 – significantly higher than UMI other economies in the region like Brazil (0.151), Argentina (0.172) and most HI

OECD countries (WITS, 2019). In brief, Chile's product basket has been and remains not extensively diversified across a wide variety of areas.

Chile has not been successful either in producing vertical spillovers within the mining industry since it continues to struggle to move production beyond the chain of copper extraction and refinery to the production of copper manufacturing goods (Korinek, 2013, pp. 36-38). This reality, according to this body of research, makes unlikely that exports were diversified and upgraded to more technologically advanced industries.

3) Export diversification

Finally, Chile's overfocus on its comparative advantage can be reflected on its export diversification index score, that is the extent to which the exports of a country differ from the world's average. In most developed countries the number is close to 0 (as these usually have a wide variety of exports), while in the less sophisticated economies the number is closer to 1, indicating their export basket is quite unique. Chile scored 0.778 in 1995 and 0.729 in 2013, substantially higher compared with UMI economies in 2013 such as Mexico (0.406) and Malaysia (0.443) (UNCTADSTAT, 2019). Chile has not converged to the average HI export structure, it continues to be of a unique nature concentrated on a fewer series of products relative to HI countries.

There is no doubt that Chile fulfils the first requirement in this body of literature – exploiting its comparative advantage. However, Chile's export basket reflect that spillovers have been too scarce and that mining, far from leaving space for other industries to emerge, has taken a larger share in the total value of exports. Only in agriculture, forestry and fishing, Chile has developed a remarkable comparative advantage, yet in the decade previous to 2013 its total share has actually decreased compared to mining. In regard to industrial upgrading and export diversification there is a clear failure of the CNIC that can be attributed to a lack of consensus, vision, strategy, clear goals, something that good institutions alone cannot make up for (Foxley & Stalling, 2016, pp. 30-31).

Conclusion

The fact that, scholars, journalists and even Chilean top officials themselves, understand and share the same idea about the inherent difficulties to reach the HI level (The Economist, 2018), makes the MIT real as any other concept in international political economy. For that reason, studying a *universal* concept at a *national* level, can help to discern what these shared difficulties are, as their causes and policy prescriptions might be applicable in other contexts. In the case of Chile, getting institutions and education right in combination with market-friendly policies helped the country escape the trap, but as is discussed at the end of the conclusion, this success came at the expense of other failures.

Summary

This paper studied Chile's trajectory from UMI to HI country based on the concept of the MIT and the main literature about it, with the research question '*How did Chile overcome the middle-income trap?*'. Chapter 1 evaluated the arguments for and against the existence of the MIT and concludes: the arguments against suffer from serious flaws in understanding the concept as they oversimplify its meaning and scope of interest by homogenizing the in-country experiences across time and space. On the contrary, arguments for the existence of a trap are methodologically more sound and helpful to better understand the shared inherent challenges MI countries face to reach the HI level.

Chapter 1 proceeds to draw from Kanchoo's work (2015) on the three main bodies of literature about the causes and policy prescriptions for the trap, in order to subsequently apply these to the case of Chile and to assess in which one its experience fits best. The first body, based on neoclassical economics, considers that the government should be limited and mostly concerned with getting institutions and education right, and meanwhile, free markets are expected to do their magic and produce wealth. The second body prescribes an export-led growth strategy by an active state in industrial policy in order to promote industrial upgrading for the economy to better compete with HI countries in the production of high value-added products. The third body also understands the importance of an active state and an export-led growth strategy, but advocates that instead of attempting to produce high-quality products, a country should first exploit its comparative advantages,

produce all kinds of spillovers (e.g. technological, information, capital...) and gradually transform its export basket into a more sophisticated and diversified one.

Chapter 2 introduces the unusual case of Chile, neither similar to the East Asian Tigers nor to other Latin American countries. A historical background is provided to place into context some of the key economic and trade policies from the 1973 coup d'état until Chile's graduation to the HI level during Piñera's first term in office. During these decades, Chile experienced outstanding rates of economic growth, especially during the *concertación* era (1990-2010). Institutions were quick and efficient to adjust their policies to deal with for instance: the 2008 global financial crisis and the devastating 2010 earthquake, using resources from the ESSF. Throughout the historical analysis, it is also highlighted the strong influence of copper prices fluctuations on the economy. As follows, some methodological remarks are presented. The chosen process-tracing method, namely 'explaining-outcome process tracing', is selected as it helps to give an account of historical events by testing theories that "can provide a minimally sufficient explanation of the outcome." (Beach & Pedersen, 2013, p. 63). The chapter ends by discussing the methodological imitations of the study.

Chapter 3 looked at the MIT phenomenon in Chile from a sectorial approach based on the three bodies of literature distinguished by Kanchoochar (2015). From the analysis, it is discerned that Chile's escaping experience fits at best in the first body of literature: getting institutions and education right. Not only does Chile's trajectory fulfil the requirements to categorize it in the first body of literature, it can also be confidently discarded from the second and third bodies. An analysis of its export basket, innovation efforts and accomplishments, as well as achieved spillovers, strongly supports the idea that unlike the East Asian Tigers, Chile's success was certainly not based on a developmentlist-focused strategy with a dynamic industrial policy. Instead, Chile's progress can be surely attributed to efficient and market-friendly institutions that created the suitable environment for the exploitation of the country's comparative advantages, for instance: maintaining macroeconomic stability, trade openness and guaranteeing the preservation of free markets – some of the essential tactics for pursuing a strategy as such. In addition, improvements in the higher education system have created a better workforce of highly skilled professionals

capable of efficiently steering these institutions and optimizing the exploitation of the country's comparative advantages.

Discussion of Results

Chile's rise to the HI level had very positive impacts for the economy as a whole. According to the liberal understanding, in theory, good economic performance will eventually trickle down the profits and to a large extent, in practice, that was true in Chile. The alarming poverty Former President Alwyn warned about was as high as 45.1% of the total population in 1987; since then it decreased to 20.2% by 2000 and to 7.8% by 2013. Extreme poverty was even more reduced from 17.4% in 1987 to 5.6% in 2000 and to as little as 2.5% by 2013 (SEDLAC, 2019). Furthermore, surpluses have also allowed the government to improve the welfare state. For instance, in 2002, Chile first began to offer unemployment benefits and by 2008, 19.5% of all the unemployed could enjoy it (a share considerably higher than neighboring Argentina, Brazil and Uruguay) (Foxley, 2012, p. 102). Government spending has remained circa 10% as of GDP during the *concertación* era, but given that the economy grew at great pace during this time, so did the total social spending in per capita terms (Ffrench-Davis, 2002, p. 189; Jeong, 2013, p. 222).

Chile's inclusive, open and efficient institutions have stand out for their performance in maintaining high rates of growth with market-friendly policies. In 2012, the World Bank institutional indicators ranked Chile at the same level of Singapore, Taiwan and South Korea, and in some specific indicators it scored even higher (Foxley & Stalling, 2016, p. 17; WGI, 2013). The openness of Chilean institutions to trade is reflected in the vast amounts of FDI it draws: 11.4% of its GDP in 2012, notably higher compared to the 2% European Union average, the 1.5% OECD average and less than 1% in South Korea (OECD, 2019b).

The government of Chile has made meaningful progress on improving the education system (especially at the tertiary level), which has been very positive for the economy and growth (OECD, 2017, pp. 20-29). To a large extent, education has also been a great contributor for both: the right guidance of Chilean institutions and the exploitation of the country's comparative advantages. Although in education rankings (e.g. skills, attainment or access), Chile scores quite below the East Asian Tigers, given the exceptional performance of the latter (often in the top 10 of the rankings) and the differences in income per capita;

Chile's performance in education is not significantly bad relative to the Asian countries (OECD, 2010, 2013). In fact, Chile's evaluation by the Human Capital Index (HCI) indicator suggests that this one is higher than what would be predicted from its income level, that is, relative to other countries: there is a better human capital with less national wealth (World Bank, 2018c).

Considering that Chile is a recent graduate of the MIT and the East Asian Tigers escaped the trap decades ago, it would be unfair to compare the two at this point in time. Furthermore, since, what matters according to the first body of literature in what respects to education is mainly: targeted improvements to produce economic growth, then the efforts of Chile according to its growth strategy cannot be practically compared to the them. However, there are three factors to be pessimistic about Chile's success escaping the MIT: 1) the reductionist understanding of GNI as an indicator of development, 2) the prevailing high rates of inequality, and 3) the overdependence on copper exports.

Three Factors to Be Pessimistic About Chile's Graduation

Among the literature that acknowledge the existence of the trap, not every scholar agrees that it is enough to surpass a certain income threshold. Ohno takes a qualitative approach to identify the MIT, locating it as a 'glass ceiling' between the stairs of industrial and technological catch-up – when countries can produce high-quality goods without foreign guidance (2009, pp. 7-8). This alternative understanding of the MIT suggests that in a more practical and emancipatory sense, Chile did not quite escaped the it in 2013. To conclude the paper three factors are presented to be pessimistic about Chile's graduation.

First: GNI does not necessarily reflects the development of an economy. According to World Bank standard measurements (Gross National Income per capita Atlas method), in 2013, Chile unequivocally escaped the MIT as a whole national economy as it was labelled a HI country. And, as it is argued by this paper: thanks to efficient and market-friendly institutions and targeted improvements in the tertiary education system. Despite that GNI can be considered a comprehensive metric to reflect the overall condition of an economy, this indicator is a non-discriminatory average number that overlooks problems such as inequality, which is extremely high in Chile compared to the OECD standard.

Second: the high rates of inequality could disqualify Chile from the HI level. The social protection system is still too divided for HI standards; with wealthy individuals receiving high quality and expensive private services while the less fortunate people only access to low quality public ones (Foxley, 2012, p. 92). Although private access to health, education and housing has improved, their costs relative to income has increased significantly (p. 144). The discontent of the population has grown consequently, most recently culminating in the civil protests that began in October 2019.

Third: Chile's overreliance on the copper industry makes the economy very fragile. By exploiting its main comparative advantage, Chile has generated large surpluses that have helped the economy attain high rates of economic growth. However, this strategy has forced the economy to overly rely on copper, making growth dependent on demand, price and other fluctuations in the market. The Chilean economy might be today ill adapted for the future as its copper industry is fragile to external demand and other shocks that can threaten sustainable growth. Whereas, the East Asian Tigers, thanks that they became HI economies by climbing the technological stairs of the ladder, they are nowadays pioneers in inventing and producing cutting-edge high value-added products, and as a result, their export economies are much more resilient than the Chilean.

The ambiguity of understanding the MIT in reference to the vague yardstick of GNI in combination with the high economic disparities in Chile and the overreliance on the copper industry, makes the author conclude this study with a pessimistic outlook about Chile's graduation to the World Bank's HI level.

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